

California **GARDEN**

JANUARY—FEBRUARY 1980

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*The
San Diego
Floral Association*

MEETING

February 19

Tuesday 7:30 p.m. Majorca Room, Casa del Prado, Balboa Park
Special Event: Slide program by Jane Minshall, long time member of Floral, world traveler, and retired landscape architect. Subject—her latest visit to South Africa and Southwest Australia.

January 29,
February 5, 19, 26

FLOWER ARRANGING CLASSES with Martha Rosenberg
Tuesdays 10:00 a.m. to 12 noon Casa del Prado, Room 101, Balboa Park
Call Mrs. Roland Hoyt for reservations 296-2757

March 4,
April 1, 8

CREATIVE DESIGN IN FLOWER ARRANGING FOR HOME AND SHOW
with Adrienne Green
Tuesdays 9:30 a.m. to 3:00 p.m. (All day workshop) Casa del Prado, Room 101
Call Mrs. Hoyt for reservations 296-2757

TOUR

February 3

Sunday matinee featuring Russian Folk Dancers from Siberia in native costumes;
Farmer's Market for no-host lunch and shopping. \$20 per person includes theatre ticket.
Reservations—Call Floral office between 10:00 a.m. and 3:00 p.m. (232-5762)
Departures—Balboa Park Pavilion 8:00 a.m. Mon. thru Fri.
La Jolla Library (Wall & Girard) 8:30 a.m.

Other Events/Shows

January 5, 6

The San Diego Rose Society will conduct a ROSE PRUNING DEMONSTRATION
in the Balboa Park Rose Garden. Both days: 10:00 a.m. to 2:30 p.m. Free

January 19, 20

SAN DIEGO CAMELLIA SOCIETY MINI SHOW
Majorca Room, Casa del Prado, Balboa Park Free
Sat—11:00 a.m. to 5:00 p.m. Sun—10:00 a.m. to 5:00 p.m.

February 9, 10

SAN DIEGO CAMELLIA SOCIETY'S 33RD ANNUAL SPRING SHOW
Conference Building, Balboa Park Admission \$1.00
Sat—1:00 to 5:00 p.m. Sun—10:00 a.m. to 5:00 p.m.

February 16, 17

IKENOBO CHAPTER OF SAN DIEGO SHOW
Majorca Room, Casa del Prado, Balboa Park Free
Both days: 11:00 a.m. to 4:30 p.m.

February 23, 24

SAN DIEGO ORCHID SOCIETY SPRING MINI SHOW
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Sat—12 noon to 5:00 p.m. Sun—10:00 a.m. to 5:00 p.m.



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JANUARY — FEBRUARY 1980

VOLUME 71

NUMBER 1

Cover: Drawing by Marj Mastro of *Homalocladium platycladum*,
a curious plant.

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Jim

226-1963

Hosta

The Plantain Lily

by Kathryn Adams

THE PLANTAIN LILY started out as *Funkia* then was re-named *Hosta*, in honor of Dr. Nicolaus Thomas Host, physician to the emperor of Vienna during the early nineteenth century.

It is a hardy herbaceous perennial with large handsome tropical-looking leaves and lily-like flowers. A versatile horticultural treasure, hosta is easily grown and useful as a landscape specimen in the garden or on the patio. Cut leaves and blooms are lovely in flower arrangements.

The lance- or heart-shaped leaves, 4 to 12 inches wide and as long, range in hue from soft chartreuse to shining emerald. Some are variegated and striped with cream and white, while in other varieties the lush green leaves are edged with white. The leaves are the hosta's special attraction and as a bonus these plants bloom from July to October.

Most of the blooms are held high above the leaf mound, on 12- to 40-inch stalks. The pendent slim-tubed, bell-shaped blooms, opening in an ascending fashion, are usually about 3 inches long.

Some varieties are faintly scented and range in color from palest lavender to shades of orchid-pink. In a few of the hybrids the blossoms are white, stand more erect, are larger—4 to 5 inches long, trumpet-shaped, and are highly scented but not over-poweringly so.

My attempt to acquire hosta plants locally revealed that some nurseries stocked them 20 or more



Fragrant Hosta Royal Standard

years ago. Home gardeners had poor results and soon the hosta became a discontinued item. Apparently, their culture was never understood, so interest in this delightful plant waned. Southern California's natural aridity needs only slight alteration to create ideal growing conditions.

Cultural requirements are simple—a moist, well-manured, semi-shaded spot, preferably with morning sun. Hosta will grow in full sun, but the leaves will fade. Too much sun on the variegated varieties will often lessen the contrasts. Shade is needed especially for the white-striped plants. Given proper growing conditions hostas will continue to thrive for many years with a minimum of care, consistently rewarding in perfect specimens, whether in the border, as ground cover, or in a container. Snails and inchworms disfigure the beautiful leaves, so care should be given to eliminate these pests.

Hostas are frost tender. A light frost will cut them down and they will remain dormant until late

spring when new leaves appear, quickly unfurling their deep-veined shiny blades. Neat, slow growing plants, they remain in clump form and can be left undisturbed for 12 to 15 years. Set closely for ground cover, they give a tidy well-groomed effect. Propagation is by division of the fascicled tuberous roots in early spring. Rarely are seeds produced. Of record, some varieties have never been known to set seed. In spite of this, my coastal southern California grown specimens did bear seed pods. The resultant plants are not yet available for comparison, but I am most curious to see the results of this garden cross.

The three varieties in my garden are all fragrant hybrids:

- ♦ *H. minor alba* is a dainty miniature, with narrow pointed leaves of light green and 12-inch spikes of white flowers.

- ♦ *H. 'Honeybells'* has medium-sized grass-green leaves and 40-inch flower spikes bearing soft lavender-blue trumpets, sweetly scented, with the fragrance of arbutus. Blooming season is July to September.

- ♦ *H. subcordata grandiflora* has large chartreuse foliage topped with 24-inch slower spikes bearing large, (4- to 5-inch) trumpet-shaped, white, fragrant blooms. This is the most spectacular of all hosta blooms. Blooms are erect, of a rich waxy texture, have good lasting qualities, and usually bloom August to October depending on the location.

Hostas originating in China and Japan are still great favorites in East Asia. They are used extensively in formal gardens and borders, and as specimens and container plants. For me, the hosta is a jewel in my favorite semi-shade garden, one that arouses the admiration of my garden friends. □

The author is a dedicated gardener who grows fine specimens of many plants in a limited space. Her miniature garden has the admiration and no doubt a bit of envy of her neighbors.

Editor's Note: Mrs. Adams obtained her hosta plants from a nursery in Oregon.

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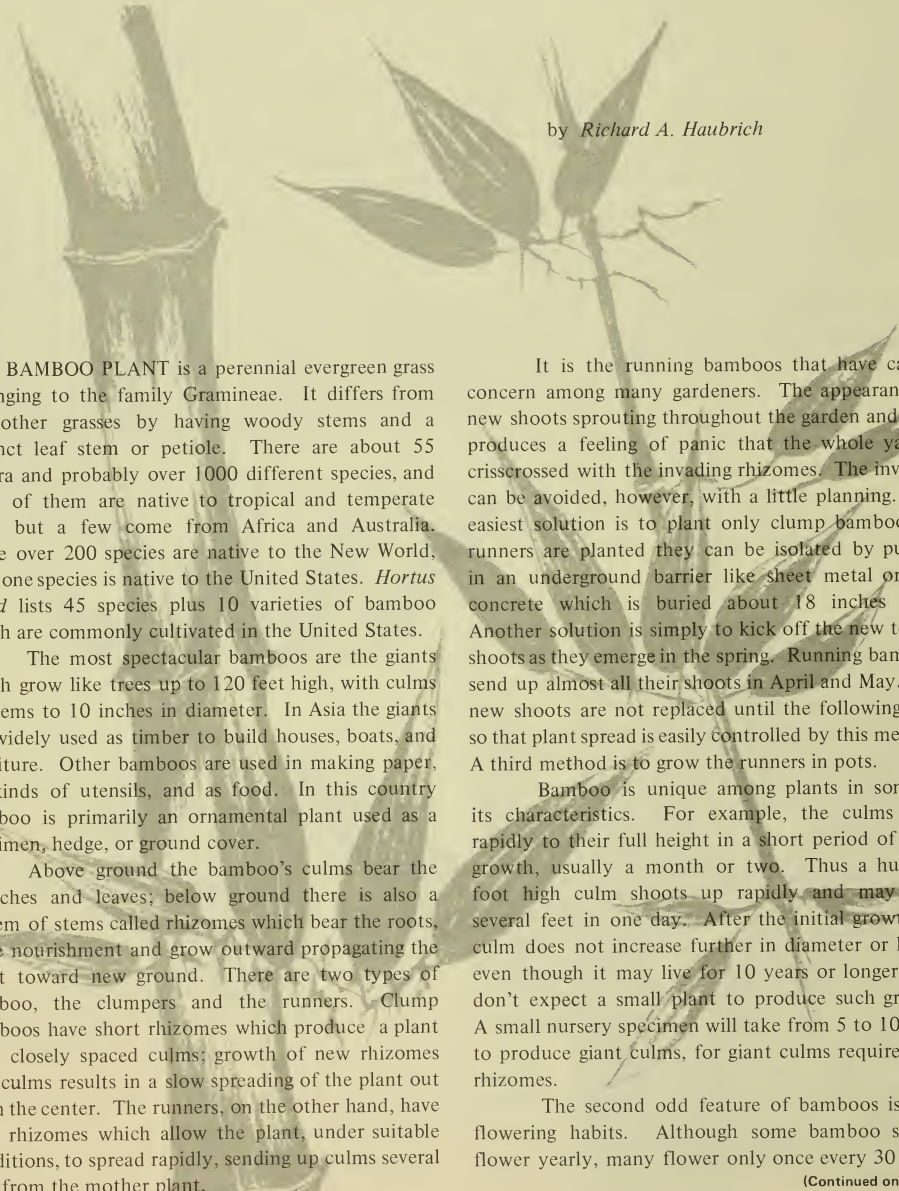
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Bamboo

by Richard A. Haubrich



THE BAMBOO PLANT is a perennial evergreen grass belonging to the family Gramineae. It differs from the other grasses by having woody stems and a distinct leaf stem or petiole. There are about 55 genera and probably over 1000 different species, and most of them are native to tropical and temperate Asia, but a few come from Africa and Australia. While over 200 species are native to the New World, only one species is native to the United States. *Hortus Third* lists 45 species plus 10 varieties of bamboo which are commonly cultivated in the United States.

The most spectacular bamboos are the giants which grow like trees up to 120 feet high, with culms or stems to 10 inches in diameter. In Asia the giants are widely used as timber to build houses, boats, and furniture. Other bamboos are used in making paper, all kinds of utensils, and as food. In this country bamboo is primarily an ornamental plant used as a specimen, hedge, or ground cover.

Above ground the bamboo's culms bear the branches and leaves; below ground there is also a system of stems called rhizomes which bear the roots, store nourishment and grow outward propagating the plant toward new ground. There are two types of bamboo, the clumpers and the runners. Clump bamboos have short rhizomes which produce a plant with closely spaced culms; growth of new rhizomes and culms results in a slow spreading of the plant out from the center. The runners, on the other hand, have long rhizomes which allow the plant, under suitable conditions, to spread rapidly, sending up culms several feet from the mother plant.

It is the running bamboos that have caused concern among many gardeners. The appearance of new shoots sprouting throughout the garden and lawn produces a feeling of panic that the whole yard is crisscrossed with the invading rhizomes. The invasion can be avoided, however, with a little planning. The easiest solution is to plant only clump bamboo. If runners are planted they can be isolated by putting in an underground barrier like sheet metal or thin concrete which is buried about 18 inches deep. Another solution is simply to kick off the new tender shoots as they emerge in the spring. Running bamboos send up almost all their shoots in April and May. The new shoots are not replaced until the following year so that plant spread is easily controlled by this method. A third method is to grow the runners in pots.

Bamboo is unique among plants in some of its characteristics. For example, the culms grow rapidly to their full height in a short period of grand growth, usually a month or two. Thus a hundred foot high culm shoots up rapidly and may grow several feet in one day. After the initial growth the culm does not increase further in diameter or height even though it may live for 10 years or longer. But don't expect a small plant to produce such growth. A small nursery specimen will take from 5 to 10 years to produce giant culms, for giant culms require giant rhizomes.

The second odd feature of bamboos is their flowering habits. Although some bamboo species flower yearly, many flower only once every 30 years,

(Continued on Page 8)

while others flower every 100 years or longer. It is also quite common that once having flowered the plant dies. In some cases the flowering of a species is gregarious; all plants in a region or even over a whole country flower simultaneously. Because of the peculiar flowering habits, bamboo seed is hard to find and propagation of plants is usually done by the simple division of a growing plant.

The running bamboos belong to the genera *Arundinaria*, *Sasa* and *Phyllostachys*. The latter are easily recognized by the distinct groove in the culms. The groove is above each branch-bearing node and alternates from one side of the culm to the other. The most common bamboo in San Diego is *Phyllostachys aurea*, golden bamboo. This is a beautiful plant but if left uncontrolled it can be quite invasive. All the sasas and most of the arundinarias offered locally are dwarf bamboos ranging from 1 to 4 feet in height. Many nurseries label these simply as pygmy bamboo. They make good ground covers and they are also attractive in pots. My favorites are *Sasa palmata* and *Sasa tessellata*, both of which have large leaves. The running bamboos are quite frost tolerant. Many can tolerate temperatures to minus 15° F. with little damage. The common genera are *Bambusa* and *Chimonobambusa*. The most widely grown clump bamboo is the giant, *Bambusa oldhamii*. Some exceptionally large and beautiful clumps can be seen in the San Diego Zoo. An especially attractive medium size is *Chimonobambusa falcata* which is generally sold as blue bamboo. It grows from 6 to 10 feet high. The leaves are a rich dark green and the culms will attain a powdery blue color if the plant is grown in at least partial shade. Another beautiful clump bamboo is the somewhat rare *Yushania aztecorum*, Mexican weeping bamboo. It is available from a local nursery, but only after a one year waiting period due to short supply and high demand. The plant, which grows from 10 to 20 feet high, has a dense profusion of long slender leaves which arch the culms from the top with their weight and often completely obscure the culms from sight with their compactness.

I collect and grow bamboo. My collection contains 35 different species and varieties, all growing in pots. In a small yard pots have the advantages of both conserving space and the versatility of rearrangement not afforded by planting in the ground. I also

find that bamboo sometimes grows faster and better in a pot than in the garden. I use a planting mix of equal parts peat moss, perlite and nitro humous. Frequent watering and weekly additions of low concentrate liquid fertilizer produce rampant growth—up to a point. The giant bamboos after reaching about 15 feet in height seem reluctant to grow higher in pots of less than 35 gallon size.

Collecting bamboo has taught me that there are many interesting and desirable species that are never offered for sale by commercial nurseries. One can see a variety of species of mature bamboo plants by visiting local botanic gardens. The largest collection is at the Huntington Library and Botanic Garden in San Marino, California; another fine collection is at the San Diego Zoo. □

Mr. Haubrich spends his working hours as a scientist at Scripps Institute of Oceanography, University of California—his leisure hours in a jungle of bamboo at his home.

Editor's note: For information concerning the new American Bamboo Society, write to R. Haubrich, 1101 San Leon Court, Solana Beach, CA 92075.

Ghost drawing by Sadako Oehler



Upper: Potted bamboo plants of several different species form a screen whose leaves vary in shape, size and shade of green

Right: The author amidst a jungle of bamboos in his garden. Note the prominent white 'culm sheaths' along the bamboo stems near the left edge of the photo—because they often exhibit features that are highly characteristic of a given species, the sheaths are an invaluable aid in species identification

Photos by BILL GUNTHER



The Sages in Your Life

by Helen Chamlee

SAGE. FROM LATIN *salvus*, safe or sound, on account of the reputed virtues of the plant. Sage. A wise man; of sound mind. Is the dictionary telling us something? Grow sages and be wise? Be healthy? In any case the idea is sound, for sages are tough, adaptable, colorful, aromatic, and some are good to eat.

The scientific name, *Salvia*, is derived from the same Latin root. Had someone asked me how many species of *salvia* there are, I might have chanced a cautious, "Two hundred?" So I was properly astonished when I found the answer should be, "More than 750." Only a small percentage of these are in cultivation, but in a genus of this size the small percentage means dozens. *Salvias* are annual, perennial or shrubby; no trees among them.

A look at countries of origin—Spain, Greece, North Africa, South Africa, California, Mexico—suggests that *salvias* may well hold a larger place in our future gardens than they do in our present ones. For these are the long dry summer parts of the world and we know that we are going to have to adjust to a sort of perpetual semi-drought, at least until the day we learn to manufacture water.

Best known and most widely used is the scarlet sage, *S. splendens*. Nothing can surpass this Mexican native for a satisfying splash of strong color in summer and fall.

Several perennial species from our own midwest have long been in cultivation. A few natives of California are cultivated, not as widely as they deserve.

Then there are the claries and garden sages grown for their flavoring or medicinal properties.

Some *salvias* you might like to try are listed here, with brief descriptions and suggestions for culture and use in the garden picture.

• ANNUALS

Most of the annual *salvias* are variations on a single theme: *Salvia splendens*. Named cultivars range in height from 6 inches to 3 feet, and in color from the flaming scarlet they started with through coral, salmon, lilac, purple and pink to cream and glistening white. Names such as 'Pillar of Fire,'

'Atropurpurea,' 'Red Blazer,' 'Early Bonfire,' and 'Scarlet Midget' clearly indicate what you may expect when they come into bloom. Color in these flowers is largely in the bracts or calyxes that surround the small tubular corollas.

Of easiest culture, this sage is indifferent as to soil, but give it full sun and regular watering. Flowers summer and fall. Common varieties are available in ponypacks; wider selection from seed.

• PERENNIALS

As a group you might say the perennial *salvias* are tailored for our gardens. They thrive in dry, stony, poor soil in full sun or part shade and survive with little or no summer water. Once established, clumps increase in size but need not be divided oftener than every 3 or 4 years. Do not fertilize; it encourages leaf growth at the expense of flowers. Most of the perennial *salvias* have blue, violet, or purple flowers. Cut back after blooming.

S. farinacea. To 3 feet; gray-green pointed leaves; violet-blue flowers. Named cultivars: 'Blue Bedder,' 'Catima,' and 'Victoria,' a dwarf.

S. azurea grandiflora (*S. pitcheri*). Taller, with gentian blue flowers.

S. patens. To 2½ feet. Dark blue flowers.

• SHRUBS

For those corners of the garden the sprinklers do not quite reach, several Mexican and Californian species are most suitable. Beyond normal rainfall they need only an occasional deep soaking. These are plants with far-ranging roots and a natural adaptation to dry summers.

S. leucantha, Mexican Sage. A stunning sight when in full bloom. Sprawling, to 3 or 4 feet with many stems from the base. Lanceolate, 5-inch long leaves, gray beneath. Flower spikes are covered, stem and all, with short, light rose-purple hairs—pure velvet. White tubular flowers scarcely exceeding the calyx are little noticed—the purple holds the eye. Best treated as a perennial, cutting back once or twice a year. Sun or part shade.

S. greggii. Bushy evergreen shrub to 4 feet. Leaves are medium green, to one inch long. Flowers

Right: *Salvia clevelandii*,
showing inflorescence and flower structure
typical of the genus

Photo by ANNE GALLOWAY



in loose clusters, soft red, best seen at close hand. Drought tolerant. Sun.

S. clevelandii, Cleveland Sage. Finest of the California natives. Spreading shrub to 3 or 4 feet. Deliciously aromatic; on a hot day it smells like warm honey. The leaves are smooth, gray-green, to 2 inches long. Whorled blue flowers with reddish calyxes contrast delightfully with gray foliage. Keep on the dry side in full sun.

Then there is Chia, *S. columbariae*, noted for its highly nutritious seeds (available in health food stores). Annual, 6 inches to nearly 2 feet; more often about one foot. Truly, plants of the driest places; I have seen them growing in bricklike soil, only 3 inches tall, producing only two flowers, and presumably two seeds. They try anything, so long as it is dry, sunny and uncrowded, from coast to desert. Flower clusters like those of *S. clevelandii*, but smaller.

• MEDICINAL AND CULINARY SAGES

Smell of sage, in the kitchen, signifies cooking poultry or sausage. This one is named *S. officinalis*, in reference to its long history of medicinal usage.

In the garden this sage forms a nice mound of grayish foliage topped with spikes of violet-blue flowers (or pink or white). An especially colorful

cultivar is 'Tricolor,' having leaves marked with white and reddish purple. Of easy culture—keep it dry, cut back after bloom, divide every three years, and enjoy the fresh flavor of its leaves in cookery.

Clary sage, *S. sclarea*. Coarse plant to 4 feet. Flowers white or pale blue, surrounded by lilac bracts. Leaves and seeds of clary have long been valued as aids to digestion and treatment for sore eyes.

Belief in the healing powers of sage was so strong in medieval times that it led to the saying: Why should a man die whilst he has sage in his garden?

John Gerard, writing in 1633, states it thus, in part, under "vertues": (Be sure to read "s" for most of those "f"s".)

"Sage is fingular good for the head and braine; it quickneth the fences and memory, ftrenghneth the finewes, reftoreth health to those that have the palfie . . . takes away fhaking or trembling of the members.

"It is likewise commended againft . . . paines of the fides, and bitings of Serpents.

"No one needs to doubt of the wholefomeneffe of Sage Ale . . ."

• AFTER ALL THAT

Don't you think you ought to be growing sages? □

HOMALOCLADIUM

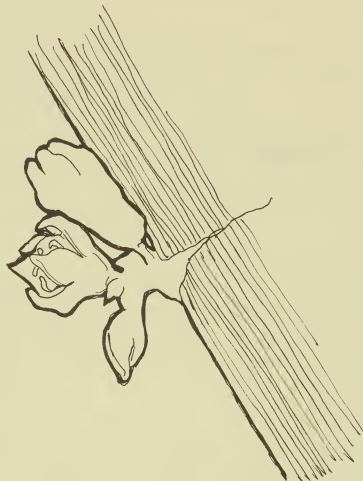
A Curious Plant

by Allethe Macdonald

MORE OFTEN THAN not the response to a statement about homalocladium is “What’s that”? It is an interesting collector’s plant or novelty in the plant world and flower arrangers find it fascinating as line material.

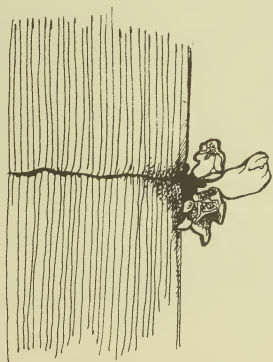
The name homalocladium with the stress on the first syllable rolls off the tongue easily and isn’t it more fun to say than “tapeworm plant,” “inch plant” or “centipede plant”? I learned its botanical name at the time I was first introduced to this oddity and when I found how easy it was to remember a botanical name it gave me such a great feeling I have made a practice of trying to learn the botanical names first when I meet new plants.

Homalocladium comes from the Solomon Islands and according to *Hortus Third* there is only one species, *H. platycladum*. The many-jointed stems are perfectly flat and of such a fresh green color that one is not aware that the plant is leafless most of the time.



H. platycladum flower (X15)

Drawings by MARJ MASTRO



Small flowers (X10) *Homalocladium platycladum*

The small greenish flowers in alternate clusters along the sides of the stem are themselves inconspicuous, but the tiny one-seeded fruits enclosed by deep red or purplish calyxes are quite attractive.

It is propagated by cuttings placed in sand or other porous rooting medium. The easiest way is to lay an 8- to 15-inch section of cane in the medium and cover about 1 inch deep.

Grown in containers homalocladium reaches 2 to 3 feet. In a semi-shaded area outdoors it makes a shrubby plant with canes 5 to 10 feet long, so stems of any length are always available for arrangements. It keeps about a week indoors and I often bring some in just to enjoy its unusual fresh green stems. □

FLOWERING PLUMS

by George James



FLOWERING PLUMS HAVE many desirable qualities. Besides the flowers which add to the beauty of the spring garden, the reddish leaves make a good contrast with the gray or green foliage of other plants from spring through fall. These deciduous trees drop their leaves in fall and remain bare over winter, then have a crop of beautiful flowers in early spring, followed by the unfolding of new leaves.

There are several varieties which differ in size, color of foliage (somewhere between reddish green and purple), color of flowers, and ability to bear fruit. Characteristics of the most commonly found varieties will be discussed at the end of this article, so that the gardener planning to plant one or more can make a wise selection.

The size to which a tree can grow is an important factor when selecting one for the home planting. Flowering plums are small to medium in size, compared to many of the trees commonly seen, so are more

suitable for city lots. They have a long life expectancy and are not usually damaged by winds. These trees can be used as patio trees, street trees where city ordinances permit, or planted in a lawn or ground cover. The dwarf varieties lend themselves to container culture. Non-fruiting varieties should be selected for planting in paved areas to avoid stains on the pavement.

Plums have a reputation for being able to grow in poorly drained soils and while they do have this ability to a degree, it is wise, if drainage is poor or the location is such that the tree will be watered frequently, to plant it on a mound raised about 12 inches above the soil level of the garden. This will allow water to drain away from the roots quickly.

Flowering plums can be pruned to meet the needs of the situation in which they are growing. They can be pruned so they develop a head that can be walked under or allowed to have side branches from

(Continued on Page 14)

Right: *Prunus pissardii*

This drawing appeared in the September 10, 1887 issue of "The Garden", a weekly illustrated journal of horticulture and arboriculture printed in England

Photo by Larry Pautler



the ground up so they will form a screen. Do not prune until flowering has finished, so the maximum of bloom can be enjoyed, but of course sprays of flowers may be cut for use as indoor decorations.

These trees are closely related to the fruit-bearing peaches and plums and are pruned in much the same manner, although usually not as severely. Prune by removing the shoots that bore the flowers; this leaves room for development of new shoots which will bear flowers the following year. If further pruning is needed to regulate height, spread, or shape, it can be done at this time. Light pruning can be done at any time excess growth appears that needs to be removed or shortened.

Bare root trees are available during January and February, and container grown plants the rest of the year. Container grown plants need less attention during the time they are becoming established and they are better equipped to cope with unfavorable conditions.

Nearly all the plants we grow are subject to attack by some kind of insect or disease. Plums are no different, being host to several diseases that attack their fruit bearing relatives. Pest damage can be prevented, or at least greatly reduced, by the application during the dormant season of materials used on fruiting trees. A material that will control both insects and diseases will be the most effective. At least two applications should be made—one about the middle of November as the leaves start to fall, and the second in spring as the flower buds start to swell just prior to opening, and if possible, a third application between these two. If rain occurs within 48 hours after an application is made, the trees should be resprayed.

The following are some of the varieties of flowering plum that will be found in nurseries. It is not likely that any one nursery will have all of them, so it may be necessary to search for a particular variety wanted to fill some special need.

- *Prunus x cistena*, dwarf red leaved—Naturally grows as a shrub which will become 6 to 10 feet tall, but may be trimmed to a single-stemmed tree which will be a little taller. Flowers are white to light pink, foliage purple, and fruit deep purple.

- *P. 'Purple Pony'*—A genetic dwarf that has recently appeared. Flowers light pink, foliage deep purple; tree compact, growing 12 to 15 feet high. It has been under observation for over 15 years and during that time has not fruited, so is thought to be sterile.

- *P. x blireiana* is often called simply blireiana. It will grow to about 25 feet in height; its flowers are semi-double, light to deep pink, and have an attractive fragrance. The foliage is reddish-purple when young and turns to green-bronze later in the year. It may bear a few fruit.

- *P. cerasifera 'Atropurpurea'*—is known to some as *P. pissardii*. It is a strong growing tree that can reach 30 feet in height. Its flowers are white and it bears lots of small fruit. New leaves are copper red at first, then turn to deep purple, and by late summer are greenish-bronze.

- *P. cerasifera* or *P. myrobalana* is a hardy variety sometimes used as root stock for fruiting plums, a vigorous tree that can easily grow to a height and spread of 30 feet. The pure white flowers are larger than those of most other flowering plums, and foliage is dark green. It bears large crops of small fruit.

- *P. 'Hollywood'*—is a hybrid between a flowering and a fruiting plum. The tree can grow to be 40 feet tall and nearly as wide. The flowers are white to light pink, the leaves dark green with red undersides, and it bears large crops of good quality fruit that can be used in any way plums are used.

- *P. 'Krauter Vesuvius'* is a small tree, growing to less than 20 feet in height and with a spread of about half that. The flowers are light pink and the foliage is dark purple, said to be the darkest of all the flowering plums. It may bear a few plums.

- *P. 'Newport'*—will grow to be 25 feet in height and have a spread of about half that height. Flowers are pink, the foliage is purple-red, and it may bear a few fruits.

- *P. 'Thundercloud'* grows to about 20 feet in height and spread is nearly equal to height. Flowers are white to light pink, the foliage a dark copper color, and it may bear a few fruit.

I hope this information will encourage gardeners to plant varieties of flowering plum that will best suit their needs. The beauty of these trees will be enjoyed for years to come. □



Stanley Miller Garden El Cajon

Camellias as Landscape Material

by *Alice M. Clark*

SHOWTIME FOR CAMELLIAS means beautiful blooms. We are frequently carried away with such enthusiasm for the flowers that we forget to consider the plant itself. For those whose main interest is in competitive display the flower is of paramount importance. This article is not for them, but for those who want handsome ornamentals for the garden.

Few shrubs in the plant kingdom successfully serve as many garden purposes as do camellias. They can be trees, hedges, shrubs, or ground covers, with leaves varying from small pointed overlapping forms to broad types suggesting magnolias. And always they look as if they had been told to "rise and shine." They not only look clean—they are clean. Camellias have fewer pests than most plants. Some camellias

are fast growers and some are slow growers; some grow tall with rather open growth, some grow low with arching branches; and some are in between. Discover which is which before you plant.

Visit camellia shows this year with your empty garden spaces in mind. Check your favorite colors and forms on the entry lists and then set about choosing those that will best fit your landscape. Study plants as a whole in a friend's garden or in nurseries because it is the plant rather than the blooms that you will be enjoying most of the time.

To point up this interest in camellias as decorative material we visited the Stanley Miller garden in El Cajon, California. After winding up the

(Continued on page 16)

hill we were greeted on the front terrace by our host and hostess. There we paused to enjoy the view over the purpling hills of Jamul into distant Mexico and again for a glimpse of El Cajon valley from the living room—a vista accented by corrugated limbs and seed-balls of a bare liquidambar tree that etched their way across the window. Looking into the rear garden, just one expression, “sylvan glade,” seemed to describe the sight of a velvet green lawn beneath a huge California live oak.

A spreading camellia to the right of the oak tree was an eye stopper. The slim pointed gray-green leaves seemed to flow over each other as they covered the rounded boughs. ‘Briar Rose,’ planted a year or two before the tree, is a slow-growing early-blooming sasanqua variety aptly named for the flower it resembles. It is a graceful filler for a good-sized space. At its feet were others of the sasanqua type that bring the first flowers of the camellia season. ‘Hugh Evans,’ a pink single, and ‘Cleopatra’ are trained down for a border. They have a commendable habit of seeding themselves to make more or thicker edgings. Some of these species have lilting Japanese names. The Miller’s use ‘Yae-arare,’ a large single white with a pink edge, as a ground cover.

It is interesting to observe the versatility of nature in producing this towering oak tree and the spreading sasanquas in the same time span, and the tree accepting their watering schedule so it does not have root rot.

There were many tall camellias to choose from. A large spreading specimen of the popular ‘Chandleri Elegans’ near the patio was exuberant with rose-pink blooms of anemone form, with high tufts of small petals in the center. It is an excellent plant for an accent, but a slow grower. Incidentally, no camellia of ‘Elegans’ strain should ever be topped.

Midway up the slope we stopped to observe several grafts Mr. Miller had made on the stumps of two camellia plants that had not performed well in this garden. One of these had been a tall rangy camellia that was covered with very broad dark green leaves and big full strawberry-red flowers, but the flowers did not always open. We were told that it had originated in the garden of a southern lady. Those who admired it constantly asked when she would name it. She always gave the same answer “Tomorrow” which

eventually became the name it bears today.

‘Mattei O’Reilly’ has made a tall compact pyramid of slow growth. The very large rose-pink blooms vary delightfully from semi-double to peony form, an advantage when there is not room for many plants. ‘Yukibotan’ (Pride of Descanso) is a fast growing upright with the same large variable blooms in white.

Notable for its open willowy habit and long slender leaves is ‘Imura,’ suitable for an espalier along a path or wall. A prolific bloomer, it is covered in mid-season with large semi-double white flowers that boast showy golden stamens.

Where the view must not be obstructed, plant slow growers. One of these is ‘Glen 40,’ compact and upright, with clear green foliage. It has fine large deep red blooms, formal to double rose form, middle to late season. ‘Alba Plena’ is slow and bushy with early large formal double white blooms. Its sport, ‘Fimbriata’ has fringed petals. For a pale pink flower in this location try ‘Barbara Woodroof,’ named for his daughter by William E. Woodroof, author of *Camellia Nomenclature*. ‘Barbara Woodroof’ is a west coast sport of ‘Elegans.’ It has similar flat outer petals with creamy raised petaloids in the center. Its early and mid-season blooms are striking against deep green compact leaves.

Amidst the plethora of bloom on the Miller hillside it is difficult to keep a landscape objective in mind. A black and white photograph would show the pointed oval leaves and close-knit habit of ‘Reg Ragland,’ but it takes color to convey its floriferousness. The big semi-double red blooms have large outer petals and smaller ones inside among the yellow stamens. There is also a variegated form, with white blotches. They bloom early and late. ‘Richard Nixon,’ a lovely camellia, is a favorite of Mrs. Miller’s. Its large pale pink anemone form flowers are variable; they are usually striped rose-pink, but also have solid color blooms of each variegation over a long season. It is medium-sized with dark green leaves on a shapely bush.

The blush pink semi-double blooms on ‘Mrs. D. W. Davis’ are so large they seem to weigh the bush down. It has a distinctive core of stamens sometimes interrupted with petaloids. Its broad strong leaves on the sturdy shrub point up Mrs. Miller’s remark that the habit of growth seems to resemble the leaf shape. The large clear red semi-double flowers on ‘Clarisse

Carlton' are a real stop sign. This camellia was a San Diego introduction named for by his wife by A. P. Carlton. The Carltons were well-known to garden folk in this area. The shrub is noticeably strong and upright. A variegated form is available.

One of the most dependable beauties of the last two decades is 'Guilio Nuccio,' named for his father by the Altadena, California hybridizer. It is a tall vigorous bush with long heavy leaves, pointed and serrated. The flowers, five inches or more across, with wavy petals of heavy texture often puckered into rabbit ears, is a glowing coral rose-pink. The high center core of thick waxy threads, stained red at the base, is crusted with golden stamens at the top. It is a long lasting generous bloomer, a camellia to own.

The Millers are now planting several higos in their garden, giving them the required filtered shade. Higo is the general name used for a special garden form of *Camellia japonica*. Feudal lords in Japan developed and nurtured this form of japonica centuries ago, we are told, but it was 1956 before they were introduced into the United States. These delightful 3-inch single flowers, with thick round broad petals, have a sunburst flare of white, soft pink, or yellow stamens. The outstanding stamens are the beauty of the higo bloom. It is a beauty to think about adding to the landscape.

The climate in the inland area of El Cajon is most favorable for camellia culture. However, plants that flower well there may be difficult elsewhere so buyers should inquire about local conditions. For instance, the white camellia, 'Masterpiece' by Harvey Short, does not bloom well in some places, but seems happy on a cold shaded terrace in coastal La Jolla.

The Miller garden is a happy combination of talent, climate, and topography. Drainage is assured because they grow on a hill. Built-up areas are retained by curved logs. Each year the beds are mulched with 2 or 3 inches of shredded leaves, then top dressed with a little nitrogen to speed up decomposition. In time the soil becomes as springy as that of a natural forest. Summer sun can burn so the area not shaded by the oak tree is covered with saran that gives about 50 percent shade.

The reward for giving camellias a place in the landscape is pure pleasure all year long. □

Alice M. Clark has contributed articles for "California Garden" for over 25 years.

Below: Camellias—the reward is pure pleasure all year long



Camellia japonica

Cultivars for the Large or Small Garden

• *White*—Nuccio's Gem

Medium to large, formal double. Vigorous upright growth. Blooms January to March.

Silver Chalice

Medium to large, full peony form. Vigorous, compact, upright growth. Blooms January to March.

Swan Lake

Large, rose form double to loose peony form. Vigorous, compact, upright growth. Blooms January to March.

Cottontail

Miniature, full peony form. Medium, compact, upright growth. Blooms January to March.

• *Red*—Bob Hope

Large semi-double with irregular petals. Slow, compact growth. Blooms January to March.

Granada

Large to very large, semi-double to full peony form. Vigorous, upright growth. Blooms January to March.

Kramer's Supreme

Large to very large, full peony form. Vigorous, compact, upright growth. Blooms January to March.

Little Slam

Miniature, full peony form. Medium, compact, upright growth. Blooms November to March.

• *Pink*—Debutante

Medium, full peony form. Vigorous, upright growth. Blooms November to March.

Barbara Colbert

Large semi-double with wavy, crinkled petals. Vigorous, upright growth. Blooms November to March.

Tiffany

Large to very large, loose peony form to anemone form. Vigorous, upright growth. Blooms January to March

Pink Smoke

Miniature, loose anemone form. Blooms January to March

Benjamin Berry

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vegetables

in our future



by Rosalie Garcia



LOOKING INTO A crystal ball always smacks of the occult. But anyone can take a try at it, so here goes!

A realistic projection on the place of vegetables in our future can be based on present trends. Not all will survive, but enough will develop into basic patterns to form a way of life that is already emerging, much to the amazement of many of the over 50's. In the United States there are more people in the 30's or under than in any other age group. They are generally better educated, more affluent, healthy, and determined to make a life for themselves—a life to include more time for recreation, to do their own thing. How will this affect their use of vegetables?

Women will increasingly take jobs outside the home, have fewer children, and have less time for cooking. Steaming of vegetables will take no more than five minutes. The microwave oven in combination with solar energy will be standard kitchen equipment cutting down cooking time. More and more the wok will be used for oriental stir-fry cooking. The working woman will get home after dark and produce a meal in twenty minutes, with a variety of stir-fry vegetables (such as combinations of strong flavored ones like parsnips with bland ones like squash), some steamed fish or poultry, or cheese, high protein bread,

a green salad, and fruit or dessert quickly baked in her microwave oven.

Freeze-dried fruits and vegetables which can be kept on the shelf and quickly reconstituted will be on hand to cut down preparation time. They will not be quite like the fresh ones, but better than canned and equal to frozen ones, as the astronauts tell us. The product was created by NASA especially for the astronauts and will in time be comparable in price with canned or frozen products.

Refrigeration will be much more efficient, so that fresh vegetables can be kept longer while retaining natural flavors, and will not need to be harvested in a semi-mature state when flavors are not fully developed. Then one will be able to buy ripe tomatoes in the market. They are working on a tomato that will keep for weeks after it is ripe. It is not yet introduced, but will surely be welcomed in a few years to replace that tough, tasteless 'Pearson Improved' that so often is the only tomato in the markets.

Red meats will become so expensive that only the affluent can afford them, and in the average home they will appear only on special occasions. Plenty of protein of the animal variety will be available in fish and fowl that will be reasonably priced, if not cheap. These will be raised in factory-like conditions near cities—fish in ponds and tanks, and fowl in wire pens.

Bread made of higher protein grains will again take its place as the staff of life. Much work is being done now to produce corn with a higher protein content. In the old South bread was made of corn; wheat bread was "light bread" and was not considered

(Continued on Page 20)

something that would stick to your ribs. Wheat flour was used for baking powder or soda biscuits, to be eaten with a mixture of butter and sorghum molasses or ribbon cane syrup, as a kind of dessert after a filling meal of turnip greens and turnips cooked in an iron pot over coals for four to six hours with “fat back” or back bones. Such foods will disappear because of time consumed in preparation.

Already many grains are known to be higher in protein than wheat, barley, and corn, and more will come to the baking industry with demand. Health food enthusiasts (“nuts” to many people) know of them and get the grains or seeds in health food stores which furnish mills for grinding them. The fairly well known garden plant amaranth, with its flaming red or variegated leaves, produces rather insignificant blooms. These mature into seeds which make a flour that is 20 percent protein.

The salad bar is already popular in many restaurants attracting those who like to make a meal of salad they mix themselves. People are not afraid to try and adopt many more greens than lettuce and these bars are featuring leaves of mustard, spinach, and herbs. Unusual sprouts (other than the common bean and alfalfa) are being offered, such as sprouted black-eyed peas, peanuts, and English peas. Also, many of the root vegetables, both cooked and raw, are eaten cold in salad mixed with greens.

The public is also learning of vegetables now available in specialty (often ethnic) markets that are familiar to our increasing Oriental and Mexican populations here on the West Coast especially. They are too expensive for most, but will become cheaper in time as the demand grows. The crisp, sweet jicama, a tan turnip-shaped root, has made the grade, and the green pear-shaped chayote—a squash, is now common. The bitter and winter melons are seen more, and the long slim black roots of the gobo are tried and found palatable. The knotty taro bakes or boils well and quickly and is more digestible than our common potato. We may adopt poi made of the big purple taro root, so beloved by the Polynesians and found in Hawaii. The enormous Mexican yams are a real treat. All of these are in markets now. They are not common, but will be, as more people become familiar with them.

There will still be a yearning to dig in the dirt

and to savor the flavor and freshness of vegetables direct from garden to table—something that supermarkets in all their skill will not be able to equal. In cities there will be little space left, but there still will be borders around the houses and places for pots on patios and balconies. Roof tops can often be rented and made into real garden spots. With poles and trellises and plenty of good humus, it is surprising what one is able to grow. There will always be those who will preserve and produce in spite of the handicaps.

Our plant biologists have a valuable tool in the electron microscope through which they are able to study the cell structure of plants in a way they never could before. It is now easier for them to hybridize, to make crosses more quickly and, by cloning, to produce more of a kind, thus increasing production. They are able to shorten the time required for experimentation, but even so it took ten years to produce the improved edible pod pea now available as ‘Sugar Snap.’ These peas are still tender and sweet when fully developed. The whole pod is delicious raw, or steamed a few minutes.

We can expect many more improvements and a greater variety, and we will have to eat more vegetables. I do not predict that hamburgers and French fries will disappear, but ground meat is already mixed with soy beans and may come to be all vegetable in time. Many additional palatable and nourishing protein products will slip up on us.

In the United States I do not see the entire population living in cities in the future, but there will be fewer small towns and small cities. Industrialization is here to stay and cities will be where the jobs are. Already nearly 80 percent of our population lives in cities and I do not foresee that this will change.

There will be more second homes, but they will be mobile. The recreational vehicle will provide the cheapest and most convenient way for city people to get out for vacations and find a different scene. Already there are private and public parks where people can drive in and rent spaces for weeks, or for months of good weather, in remote areas “away from it all.” Some will stay there long enough to plant and raise gardens. Others will travel with pots of greens and herbs so they always have something fresh. The freeze-dried vegetables will be available in packages that take little space, so food will not be a problem.

Eating habits are slow to change and are cherished as sacred rights. Some children have already

formed their eating habits and will have difficulty in adapting, but a stern law of life is "adapt or perish," and even they will manage, but the great majority of younger people want life simple, easy, and full of variety, and they are on their way. More power to them! □

SEED SPROUTING TODAY

THE EASIEST GARDENING which anyone can do is sprout-making with a wide mouth jar, a net top covering, and seeds. Soy and mung bean and alfalfa sprouts are now common in our supermarkets. One can easily make them at home, but for unusual sprouts one can experiment with other seeds bought in health food stores or nurseries. Black radish, red clover, pepper grass are well established—a friend recommends pumpkin seeds. Any seed can be used, but some turn out to be bitter. There are those who do not mind a little bitterness; it is one of the four basic tastes along with sweet, sour, and salty.

To start your easy garden soak about one-half cup of seeds overnight, wash, place in a quart jar, put on the mesh top (use old nylon stocking or several layers of cheesecloth), and lay on its side in a dark warm place or lay on the shelf and cover with a towel. The important thing is to place it where you will be constantly reminded to rinse the seeds well morning and night. Most are ready to eat in six days, some kinds sooner. About two days later start another jar, thus ensuring a continuous supply. Sprouts retain freshness about two days if refrigerated.

Sprouts always provide something fresh and crisp and high in food value. Try them! R. G.

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The Thousand Dollar Beetle

by Bill Gunther



THE CALIFORNIA FAN palm, *Washingtonia filifera*, is unique in that it provides the one and only environment in which the very rare, very large, and very unusual beetle *Dinapate wrighti* can survive. This beetle, commonly called the "Giant Palm-Boring Beetle" or "The One Thousand Dollar Beetle," has a life cycle so uncommon and so secluded that few people—even entomologists—have ever seen a living specimen, either in the larval stage or in the adult beetle stage.

The worm or grub which is the larval stage of *D. wrighti* hatches from an almost microscopic egg laid by the female beetle in the heart of the growing tip of *W. filifera*. Then, after hatching, the grub eats down into the woody tissue of the palm trunk, utilizing the nutrients which are contained therein, all the time growing in size, and thus boring an ever-larger tunnel through the palm trunk with powerful cutting mandibles. The fibers in the washingtonia's trunk are so hard that every time a grub chomps through one a clicking sound is produced and on a still night can be heard 15 feet away. The Cahuilla Indians, who often lived among the palms, heard these sounds, but did not know what caused them. They believed the sounds were made by spirits that inhabited the trees and they religiously refrained from abusing the palms because they thought that harming them would anger the spirits.



California Fan Palms at Mountain Palm Springs
Anza-Borrego Desert State Park in eastern San Diego County

Despite the protection afforded by the palm trunk, most *Dinapate* grubs fall victim to natural enemies (e.g., the larva of the fly *Sarcophaga helioides*) before they have completed the five years of wood-eating they require to develop maximum grub size. No one really understands just how the grub, deep within the palm trunk, can know how to get out, know when the month of July arrives, and know the difference between day and night. But sometime close to its fifth birthday it eats its way from the interior of the palm to the outside, converts to beetle form, and emerges—always at night and always during early July or close thereto—leaving a thumb-sized exit hole in the trunk of the washingtonia.

Once out of the palm, the beetle takes wing. Seemingly using some kind of perceptive sensing process not available to humans, the insect flies on a heading toward another of the widely scattered *W. filifera* oases in the desert, maybe many miles distant. This flight time is the only time during the normal life cycle of the insect that is not spent on or in a *W. filifera* palm. Many beetles, during their flight, are snapped up by bats and owls. Those which reach their destination congregate near the growing tip of their new host palm, where they mate, where the females lay the eggs to start a succeeding generation, and where—within just two or three weeks after converting to beetle form—they die.



It is a remarkable life cycle—perhaps a couple of days as an egg, then perhaps five years as a larva, perhaps two weeks as a beetle, then death.

D. wrighti was first found in 1886 by W. G. Wright, a clever fellow who well realized that because his new-found beetle was very rare, very unusual, and very large, it would be a real collector's item for museums and for bug specialists. So he deliberately and falsely indicated that the habitat of the beetle was out in the Mojave desert in southern California, thus triggering a procession of bug collectors to a locale where neither the beetle nor the palm existed. Subsequently, he



Dinapate wrighti, larval stage



\$2000.01

cited their inability to find the beetle as evidence of its extreme rarity, and he then announced that with his own special expertise he himself would be able to provide specimens for scientific institutions if he were compensated for his time and expenses—to the tune of \$1000.00 per beetle. The British Museum bought one with great fanfare. So did the Russian Museum at St. Petersburg. Thereafter, obviously, any museum which did not have a \$1000 beetle was considered to be second class, and W. G. Wright became very prosperous. But in 1897 came the crash; another entomologist by chance found the actual habitat of the beetle and he published his finding. Wright's monopoly was broken and his deception was exposed. Within a few weeks the value of a “Thousand Dollar Beetle” plummeted to something around \$20. Surprisingly this remains the approximate going mail-order price today.



How many would you like?

□

Photos by BILL GUNTHER

Rose Pruning in a Mediterranean Climate

by John Farleigh

IT IS NOW mid-January and time for local rosarians to go to work. In mild beautiful San Diego and other areas with warm climates the bushes are still blooming. We must now convince them and ourselves that it really is winter and time for them to take a short rest. To be brief, it is "pruning time."

Much has been written about how to prune roses, but little about why, so we will devote a paragraph to this practice, which in the opinion of some of our gentle gardeners is barbaric and cruel to plants. We point out to them that the plants have become too tall and the blooms progressively smaller to the point of diminishing return, and that mildew, rust, and spider mites that some of us conveniently ignored during summer vacation and fall holidays have taken their toll of the once abundant foliage. Our fungus and insect adversaries almost never take a vacation in warm climates. To keep them under control we must use a spray so strong that in most cases it also removes the foliage. Additional justification for pruning is provided by horticulturists who reason that since most roses originated in colder climates they perform best with a forced dormant period.

Having convinced ourselves of the necessity, we sharpen the clippers and head for the rose garden feeling only slightly like a butcher. Being of a sentimental nature we first salvage all the bloom and all the buds that could possibly open and place them in deep water for conditioning. These we cherish to the end, for we will have no more blooms until April.

After the blooms are gone a strange transformation takes place—what was once prize stems and foliage almost instantly becomes trash to be discarded. The too tall growth and small weak canes are removed, then any that cross through the center or interfere with another. All dead branches are pruned back to the bud head (the knob where the canes originate on most roses). Older canes that have cork-like bark usually have no bud-eyes remaining so they too are removed.

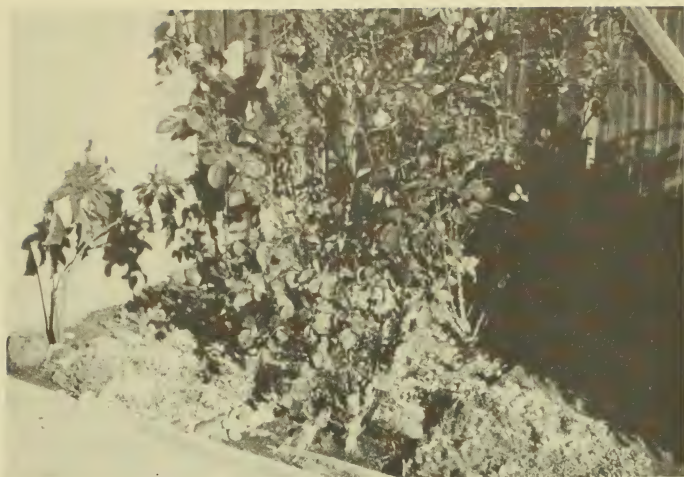
There is a bud-eye above each leaf where it

joins the cane. It is preferable to prune the canes a quarter inch above an outside bud-eye, slanting the cut away from the bud-eye. Ideally, the canes should be equally distributed around the bud head and when properly pruned the plant will have a vase shape. Alas! In real life seldom do we find the ideal; too often we must settle for two or three canes, however distributed. Sometimes we have only one and search in vain for a good bud-eye. You end up doing the best you can with what the plant provides, and hope it will respond by producing new canes (basal breaks) either in appreciation or desperation.

A prominent rose grower suggests that we save 4 or 5 good canes and cut them off 6 to 8 inches from the ground. In areas where no winter protection is required, prune the bush back one-third its height. Following these instructions to the letter has brought many local bushes to an untimely end. In all fairness to this grower, I will say that in years of searching we have found no clear, concise, and applicable instructions on pruning roses in this mild-winter area.

Most old timers in the San Diego Rose Society received their pruning instructions from Doc Thompson and Mary Armstrong who for many years came to San Diego early in January to take part in pruning the public rose garden in Balboa Park. Local rosarians developed their own empirical formulas after observing these experienced pruners. Whatever their differences, they all agree on one point: "If your system works—use it." The casual observer sometimes concludes that all rosarians prune differently. In a sense, this is true, but what is not always apparent to the untrained eye is that pruning is tailored to the individual bush, by type and sometimes by variety. For example, such varieties as 'Peace' and 'Charlotte Armstrong' will simply not tolerate heavy pruning and experience has taught us to give them only a gentle trim.

The hybrid-tea bush has been used for our example since it is the most popular type found in home gardens. In any explanation of pruning it is



Left: Floribunda rose bush before pruning

Below: Floribunda rose bush after pruning

Photos by DR. ROBERT LINCK

only fair to mention the other roses, i.e., floribundas, grandifloras, shrubs, miniatures, and climbers. Since space does not allow the details of pruning each type, we will simply state that the pruning practices are essentially the same except for climbers. On the climbers save all of those nice new canes since that is where next year's bloom will be found, but only if they are gently arched and tied down to a trellis or fence; then they will send up a stem from each leaf node to give the abundant bloom we expect from a climber.

The pruning process is not completed until we have removed all the leaves remaining on the canes and picked up all the leaves on the ground. Each fallen leaf probably has, on its underside, spores of mildew and rust, and sufficient spider mites to colonize the entire garden. When all debris is cleaned up, the plants and the surrounding ground should be saturated with a good dormant spray—preferably two applications with a week between.

Finally, give each plant a full cup of dry fertilizer high in nitrogen and dig it in well. Then wait for a good soaking rain, but if this rain does not come, water thoroughly.

Invariably, in the week following Easter, we are rewarded with a new crop of our favorite blooms and the labor of love is repaid in full! □



John Farleigh, rosarian, rose judge, wins many awards with his outstanding roses

are plants smarter than people?

by Dr. Donald P. Watson

“KEEP OFF THE GRASS” in a park in Tokyo has to be printed in Japanese calligraphy, Spanish, English, German and French. But the label on the shrub in the same garden merely has to be *Camellia japonica* ‘Debutante’ and tourists from Mexico, England, Germany or Tahiti can identify the plant.

Perhaps we should say that plants with their international language are smarter than people. I remember well the answer from a Japanese professor when I asked him how he could spend so much time with me. He replied “I’m like *Equisetum*.” This was his way of telling me that he taught one semester and conducted research the next. During his research cycle he had time to be my host. It took me a minute to catch on. Then suddenly I realized he used the one word *Equisetum*, the genus of the common horsetail, because it has two generations, first producing a brown bristle-like plant followed by a green fern-like plant.

Then there was the Austrian who described his lady friend, “She *tigrinum*”—the species of the tiger lily.

For years I have wondered why amateur horticulturists seem frightened by this scientific terminology. It could so easily become part of their vocabulary. Chemists, sociologists and physicians clarify their science with professional terms. And plant scientists have such a fine foolproof and relatively simple vocabulary at their disposal.

Take lilies for example. The tiger lily is *Lilium tigrinum*, Madonna lily is *Lilium candidum*, and Easter lily is *Lilium longiflorum*. *Tigrinum*, *candidum*, and *longiflorum* indicate species. Species (singular or plural) designates individuals so nearly resembling one another that they suggest common parentage. *Lilium* is the genus (singular, genera plural) and a genus is merely a collection of related species.

Naming plants is not unlike naming people with a surname and a given name. Linnaeus, a professor of Botany at Upsala University in Sweden, developed the system and published the *Species Plantarum* in 1753. A few other examples are *Allium cepa* (onion), *Allium sativum* (garlic), *Allium tuberosum* (Chinese chives). *Allium*, *Lilium*, *Tulipa*, *Asparagus* and many other genera are grouped into a logical family relationship under the family name Liliaceae. Plants in this family have such common characteristics as fleshy bulbs or bulbous roots, long (linear) fleshy leaves and flower parts in denominations of three.

All plant families have recognizable similarities. Corn, grass, and sugar cane with long thin leaves belong to the grass family, Poaceae. A field of corn from a plane at a thousand feet looks exactly like a well-groomed Bermuda grass lawn at close range. Peas, mimosa, and acacia belong to the legume family, Leguminosae. They have similar leaf structure and produce seeds in pods. It is a large family and has sub-families but the pods are a good guide when trying to locate the name of a plant.

Plants with popular names such as ‘Golden Bantam’ corn, ‘Peace’ rose or ‘Debutante’ camellia are called cultivars, cultivated varieties. They used to be called varieties but the name cultivar was adopted at the 15th Horticultural Congress in Nice, France. It overcame a lot of confusion, for “variety” in English was “variété” in French, “variedad” in Spanish, “sorte” in German, “sort” in Russian, “ras” in Dutch, “rozza” in Italian, and “hinshu” in Japanese. An example of a complete name of a popular horticultural plant is *Camellia japonica* ‘Debutante,’ the genus followed by the species and cultivar names.

This is a somewhat oversimplified explanation of the system of naming plants. There is no need to take the romance out of the garden by insisting that a violet is *Viola odorata*, a honeysuckle is *Lonicera japonica*, or an Easter lily is *Lilium longiflorum*. But knowing these names will help considerably if you want to be certain of an identification, for common names vary from place to place even within the boundaries of one state. Botanical names cross countries and boundaries without changing.

When we get used to them, botanical names sound like any other names. We have streets named Kalmia, Acacia, Plumeria, and Poinciana—all these words are botanical names of plants. □

Typical seed pods of various species of Legume family (Leguminosae).



THE SUCCULENT EUPHORBIAS

by Dorothy Dunn



The interesting growth habit of Euphorbia grandicornis

THE SPURGE FAMILY is one of the largest, most fascinating and diverse families of flowering plants, distributed over the entire earth, and comprising about 250 genera and 6,000 species of trees, shrubs, herbs, and weeds, all having an unpleasant milky sap called latex. Only those which are strikingly cactus-like and which are native to desert regions of Africa, Madagascar, India, the Canary Islands, and Mexico, can be classed as truly succulent, and these 300 to 500 species are the ones which are of especial interest to us.

Euphorbias first gained recognition more than 2,500 years ago. The earliest reference to them is associated with Hippocrates, the Father of Medicine,

and the few species known to the earliest botanists and physicians were of interest primarily for the purgative value of their latex. The popular name, spurge, has been derived from this use of the plants. This sap, or latex, is distributed throughout the plants and is extremely irritating and poisonous. For instance, *Euphorbia virosa* is known as the "venomous euphorbia"; its poisonous latex was used by African Bushmen and Hottentots as an ingredient in their arrow poison, and the pulp of some species was thrown upon the water by primitive fishermen to stun their catch. *E. tirucalli*, another extremely poisonous plant, was

(Continued on Page 28)



Interesting closeup of *Euphorbia grandicornis*

experimented with as a source of low-grade rubber during World War II, and more recently as a source of fuel. *E. tetragona*, when in flower, attracts hordes of bees but the resultant honey is of no value—it is dark in color, extremely unpleasant to eat, and hot as pepper. At one time this honey was used for treating sore throats, but since the remedy was more painful than the ailment, the practice has long since been discontinued. *E. antisyphilitica* is a source of candelilla wax, which is found as a coating on the surface of this plant. The wax is obtained by immersing the stems in boiling water; the wax melts and rises to the surface. The refined wax was used (at one time) in the manufacture of phonograph records, celluloid articles, varnish, shoe polish, floor wax, as an insulating agent in electrical equipment, and as waterproofing for tents. It is still sometimes used in the making of lipstick.

The name *Euphorbia* was first applied to these plants by King Juba II of Mauritania who discovered a species (probably *E. resinifera*) growing on the slopes of Mt. Atlas and named it after his favorite physician

Euphorbus. (The word *euphorbus* in Greek means well-fed, and this probably seems an appropriate name for these strange, thick succulents.)

The succulent euphorbias, which greatly resemble some cacti with their fierce spines and strange shapes, are actually far removed from that family, but the two have worked out water storage and heat resistance problems on practically the same principles. In the process of adaptation to drought and in almost every other way the succulent euphorbias are to the Old World what cacti are to the New World. This resemblance is one of the classic examples of parallel development in the plant world, and can be confusing. However, there are several important differences which will help in identifying the euphorbias. First, all euphorbias exude the milky sap, or latex, which has already been mentioned, while in the cactus family this is a rarity, occurring only among certain species of *Mammillaria*. Second, the euphorbias do not produce their spines from areoles, as do cacti, but directly out of the stem itself. Third, the euphorbias have a strange and complicated flower, utterly unlike the simple and showy cactus bloom. Euphorbia flowers are usually small and insignificant; however, they are intricately constructed and not easily explained to non-botanists. And finally, while the cactus fruit is a one-celled berry with seeds simply scattered through it, the euphorbia fruit is usually a three-lobed capsule, each lobe containing a single seed, and it bursts explosively when ripe.

Euphorbias can be found growing anywhere from the very arid regions of southwest Africa to the tropics of the Belgian Congo, and at least one species has been found at an altitude of 6,000 feet. They range in size from tiny plants only an inch or two high to huge tree-like specimens which can attain a height of 60 or even 90 feet. For instance, *E. ingens* can easily reach a height of 30 feet or more; this plant is sometimes called the cactus euphorbia, and the specific name *ingens* means huge. Some euphorbias such as *E. ornithopus*, have large tuberous roots and can be made into interesting bonsai-like specimens.

Winter in southern California is the usual growing season for most euphorbias and they may be grown out-of-doors in any type of well-drained soil (the soil should be sandy and porous, yet nourishing). They need protection from frost and excessive rainfall. Good drainage is of vital importance. The species with leaves can be given plenty of water in the summer,

but the more succulent species must be watered very carefully, especially in winter. Many species do better with at least partial shade.

Pollination is usually by flies or other small insects, or by the force of the wind, and propagation is by seeds, cuttings, or grafting. The seeds are disseminated by ejection—a 3-foot high plant of *E. grandicornis* has been known to propel its seeds a distance of 12 feet. All branched euphorbias may be propagated by cuttings, and this should be done only in warm weather. The cuttings are often very slow to root—it is not unusual for a cutting to take a year or more to root. Also, cuttings of some species such as *E. caput-medusae* and *E. bergeri* may not resume the characteristic shape of the parent plant. Cuttings will bleed, and should be dipped in dry sand or washed off with water to minimize this, then allowed to dry thoroughly. This can be a matter of days or even weeks in the case of larger-stemmed cuttings. The cuttings are then set in very sandy soil, which should be kept fairly dry until roots begin to appear.

It is better to underpot these plants—the depth of the pot is more important than the diameter, as many euphorbias have large, long roots. Also, it is a good idea to re-pot about every other year with fresh soil in order to maintain good health.

Euphorbias are remarkably free from pests; root nematode is probably the most common one to be encountered. Whereas this can be extremely detrimental to cultivated plants in the garden, according to one authority it can actually be beneficial to plants growing in the wild, "It causes the rootlets to swell out and the bladder-like extensions thus formed act as reservoirs for water!" □

Dorothy Dunn is a knowledgeable grower, whose profession is propagator of cacti and succulents. As a member of the Palomar Cactus & Succulent Society she gives a workshop on different species at each meeting.

Photos by BILL GUNTHER

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NOW IS THE TIME

BEGONIAS Margaret Lee

- ✓ to keep plants cleaned up.
- ✓ to remove dead leaves from plants.
- ✓ to watch watering—make sure the plants do not become too dry.
- ✓ to add more mix to pots as needed to keep roots covered.
- ✓ to spray for mildew, to control snails and slugs, and spray for mealy bugs and for loopers.
- ✓ to start tubers for bloom later in the year.
- ✓ to start cutting back lightly on cane and shrub types toward the last part of this period.

BONSAI Dr. Herbert Markowitz

- ✓ to watch watering—do NOT overwater.
- ✓ to use dormant spray such as copper, oil, or lime/sulphur mixtures, particularly on maples, quince and other deciduous trees after they have been pruned.
- ✓ to graft evergreen trees as well as conifers in January; deciduous trees in February.
- ✓ to watch for aphids and other sucking insects and spray accordingly.
- ✓ to refrain from fertilizing your trees.
- ✓ to protect plants from too much moisture during rainy period.
- ✓ to prune fruit-bearing bonsai.

BROMELIADS Thelma O'Reilly

- ✓ to remove damaged leaves, leaving at least two inches above soil line to protect new offsets against cold damage.
- ✓ to clean out cups and check between leaves for slugs.
- ✓ to protect your plants from cold—cover with newspaper at night.
- ✓ to wait until weather warms before fertilizing (late Feb).
- ✓ to give colored leaved varieties more exposure to winter sun.

CACTUS & SUCCULENTS Verna Pasek

- ✓ to protect tender cacti and succulents from frost.
- ✓ to withhold fertilizers; plants need rest at this time of year.
- ✓ to protect from too much water; keep on dry side in cool temperature areas.
- ✓ to watch for insects; use malathion to control most pests.
- ✓ to use alcohol and water with cotton swabs for scale.
- ✓ to be aware of blooming cacti and succulents.

CAMELLIAS Benjamin Berry

- ✓ to pick up all fallen blossoms to avoid an infestation of petal blight (sclerotinia).
- ✓ to renew mulch where needed; use fir bark or pine needles.
- ✓ to continue to feed 2-10-10 or 0-10-10 to established plants.
- ✓ to maintain a regular watering program unless sufficient rains have fallen—they like soil moist, but NOT wet.
- ✓ to maintain a regular spraying program. Dust with chlordane under and around plants to discourage leaf beetles.
- ✓ to make grafts.
- ✓ to transplant camellias. Do not fertilize newly transplanted bushes, but water well and often with a vitamin B-1 solution.

DAHLIAS Abe Janzen

- ✓ to dig those tubers left in the ground. By early January the tops should be completely withered. Cut tops just above the ground.
- ✓ to store tubers, without dividing, in vermiculite or sand, leaving the soil on that adheres to them. Keep in a cool area.
- ✓ to inspect those tubers stored earlier for any sign of shriveling; if too dry, add a little moisture.
- ✓ to start preparing your garden plot in February. Turn soil, add humus, and fumigate. With humus add equal parts of superphosphate and sulphate of potash—turn well. (Use ratio of 2½ pounds for each 100 square feet of soil)

EPIPHYLLUMS Mary & Warren Kelly

- ✓ to protect against too much water, particularly if a rainy season. Keep moist but not wet; do not allow to dry out.
- ✓ to start feeding in late January or February with low nitrogen fertilizer (2-10-10) to prepare for the blooming season.
- ✓ to watch for snails and slugs.
- ✓ to tie stems to protect from breakage.

FERNS Ray Sodomka

- ✓ to spray for aphids—especially maidenhair ferns.
- ✓ to keep after slugs, snails, pill-bugs, etc.; cold weather does not stop them.
- ✓ to water and not rely on rains for sufficient moisture.
- ✓ to trim off old fronds in frost free areas only.
- ✓ to fertilize platyceriums (staghorns); give bone meal, hoof and horn, or a high nitrogen liquid.
- ✓ to replant spore.

FUCHSIAS William Selby

- ✓ to prune, if you haven't already, after the last frost danger. Prune when soil is moist and the leaves turgid (leaves and stems are full of water).
- ✓ to prune heavily, leaving strong stems about ½ inch ahead of a node.
- ✓ to clean all spent blossoms, berries, leaves, and trash from around, in, and under all plants and containers.
- ✓ to spray remaining foliage and ground to eliminate pests that have wintered over.
- ✓ to apply a good 10-5-5 fish-type fertilizer after pruning.

GERANIUMS Carol Roller

- ✓ to water less often, but thoroughly.
- ✓ to continue feeding a balanced fertilizer in liquid form every 4th or 5th watering.
- ✓ to prune any plants which have not been cut back. Leave some green leaves on each stem being cut back. Leggy plants which were cut back once can be cut back again to produce a more compact plant.
- ✓ to tip pinch young plants and larger plants which were pruned earlier.
- ✓ to make cuttings from the prunings and shelter them from extreme weather.
- ✓ to continue pest and disease control using all products according to the manufacturers' directions.
- ✓ to give temporary shelter from freezing if temperatures go below 28 degrees.

GESNERIADS Mike Ludwig

- ✓ to prepare pots for the spring planting season—wash with hot water and let them stand overnight in Clorox solution to be sure there are no pests in them. Wash thoroughly after the soaking and let air dry for a day or more.
- ✓ to spray for pests and disease as plants are somewhat dormant and less subject to damage. Check undersides of the leaves and the crowns of the plants.
- ✓ to be sure not to water on a cold or cloudy day, or late in the afternoon.
- ✓ to start rhizomes of achimenes. Place them on top of damp vermiculite in a shoe box; watch for mold. Sprouts should be showing in 15 to 30 days. Place them in a loose potting mix, barely cover, water thoroughly, and wait for sprouts to show through the soil.
- ✓ to order supplies needed for spring; select plants for the Exposition and plant show, and the pots in which to display them.

HEMEROCALLIS Sanford Roberts

- ✓ to water only when soil is dry.
- ✓ to remove dead bloomstalks and foliage from base of clumps to combat aphids that might winter over and invade new growth.
- ✓ to prepare areas for spring plantings. Spade deeply, incorporate peat moss and organic compost. Mix thoroughly.
- ✓ to plant seeds in a good potting mix after they have been refrigerated 45 days or more to induce dormancy.
- ✓ to wait until February or a little later to divide.

IRIS San Diego-Imperial Counties Iris Society

- ✓ to water your plants, especially if rains are light.
- ✓ to make last plantings of the bulbous iris for spring bloom.
- ✓ to start a regular spray program with copper oil spray to help control rust.
- ✓ to start in February to feed all iris with a liquid 0-10-10 fertilizer; but do not over fertilize.
- ✓ to establish a regular program of snail, slug, and aphid control.

ORCHIDS Charlie Fouquette

- ✓ to check for moisture in pots; do not be fooled by gray or overcast days.
- ✓ to check name tags on plants or in pots. Be alert so as not to lose identifications.
- ✓ to use low-nitrogen fertilizer on cymbidiums. Do not feed if overcast. February is the dormant period for cymbidiums.
- ✓ to stake up flower spikes on cymbidiums.
- ✓ to be aware of weather; protect from sudden drops in temperature. For increase in sunlight use some thought in removing shade cloth. Particularly watch south exposure as the most dramatic change will show in that area.
- ✓ to check burners and valves on heaters; also check pilot lights and accuracy of temperature switches.
- ✓ to remember some phals should be spiking. If you move or repot, place back in the same general direction so flowers will bloom symmetrically.
- ✓ to water the many orchid plants that have no pseudobulbs.
- ✓ to spray walls and benches with consan solution to cut down on algae.
- ✓ to dry out the American orchids from Southern Hemisphere—laelias, oncidiums, epidendrums.

ROSES San Diego Rose Society

- ✓ to prune roses.
- ✓ to spray after pruning to control pests, rust, fungus—use a dormant spray.
- ✓ to cultivate established beds; feed as new growth starts—one cupful per bush.
- ✓ to give newly planted bushes liquid fertilizer six weeks after planting.
- ✓ to start preventive spraying in February for mildew and aphids—using ½ strength on new foliage.
- ✓ to establish a regular schedule for watering and spraying.

VEGETABLES George James

- ✓ to set plants of broccoli, Brussels sprouts, cabbage, cauliflower, celery, chard and collards, if the soil isn't too wet.
- ✓ to search for new and superior varieties of spring and summer vegetables.
- ✓ to start seeds, in February, indoors, of spring vegetables.
- ✓ to plant artichoke and asparagus divisions which are now available.
- ✓ to set plants of berries that bear edible crops before the end of February.

CALIFORNIA GARDEN (USPS 084-020)
San Diego Floral Association, Inc.
Casa del Prado, Balboa Park
San Diego, CA 92101



SNOWDROP – Flower of January



Flower of February – PRIMROSE



VIOLET – Flower of March



Flower of April – DAISY



HAWTHORN – Flower of May



Flower of June – HONEYSUCKLE